Banc Ceannais na hÉireann
Central Bank of Ireland
Eurosystem

Payments Statistics

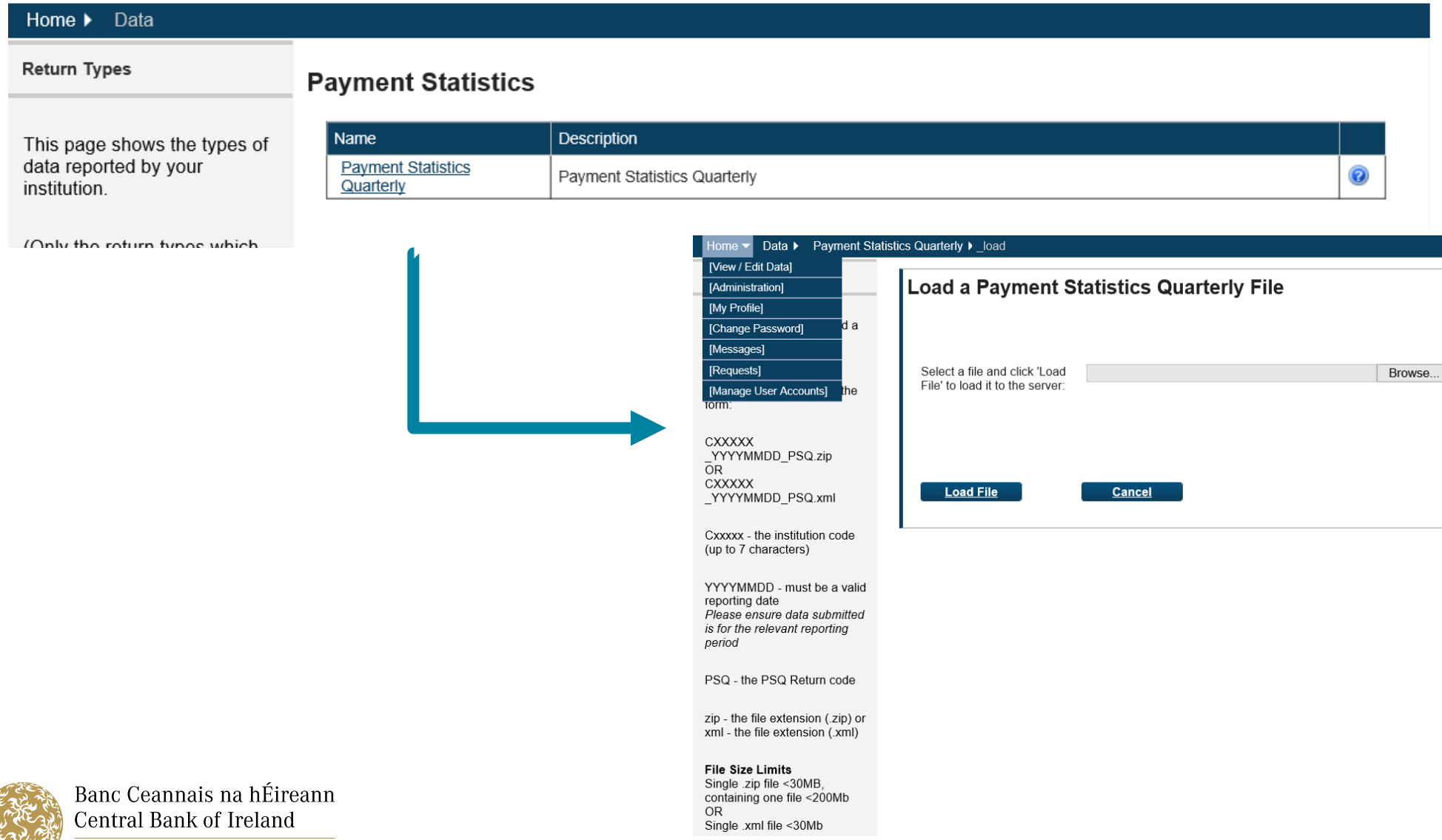
Validations Workshop – 14 March 2022

Overview

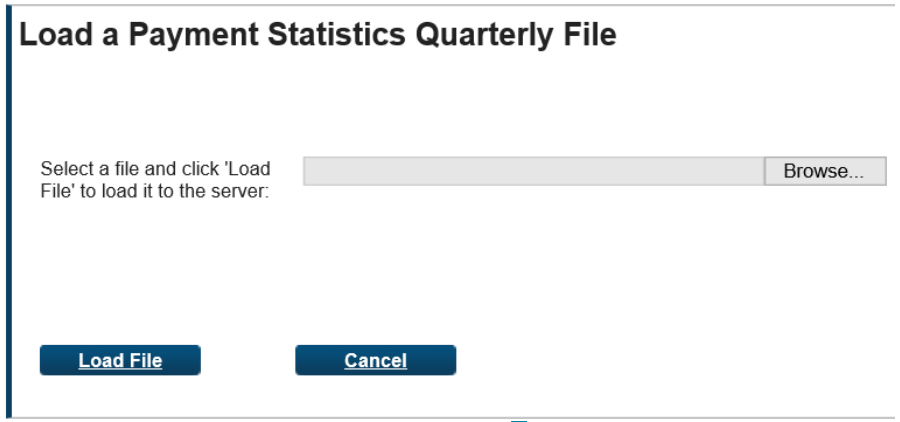
- Introduction
- ONR Upload process
- Data quality process overview
  - Data validation timelines
  - Data quality flow
- Pre-submission validations
  - ONR Validation checks
  - XSD Conformance Checks
  - Pre-submission (consistency) validation checks
- Post-submission validation rules
- Q&A

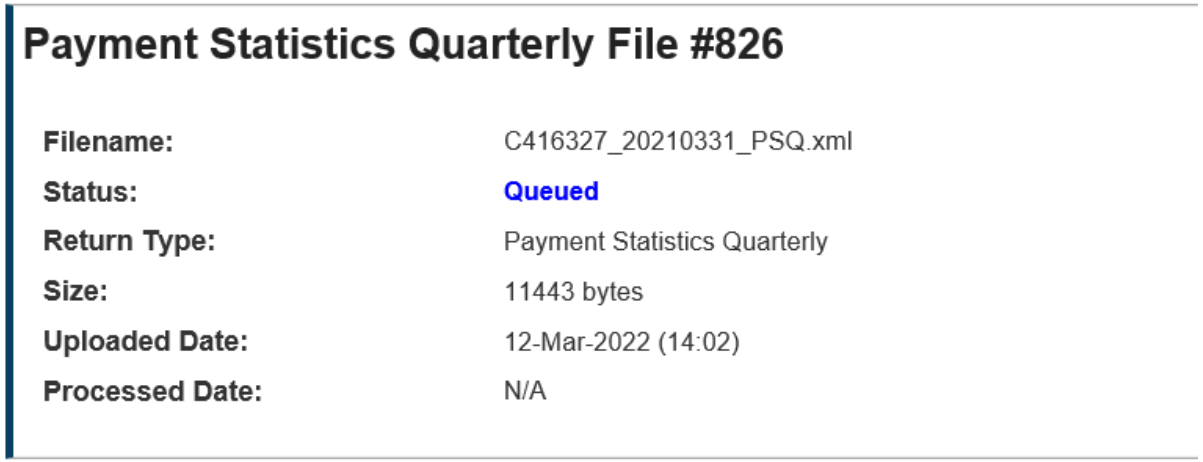
ONR Upload process

ONR Upload process



ONR Upload process



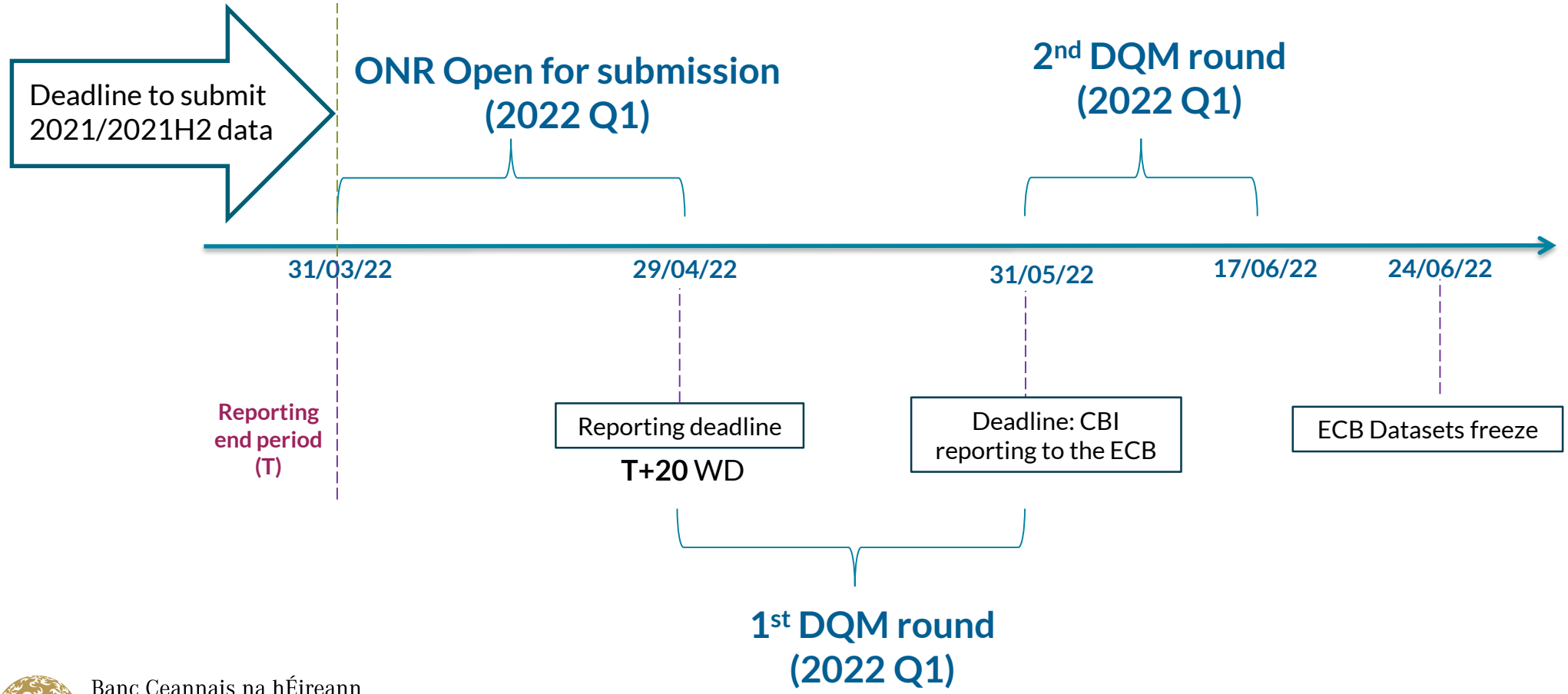


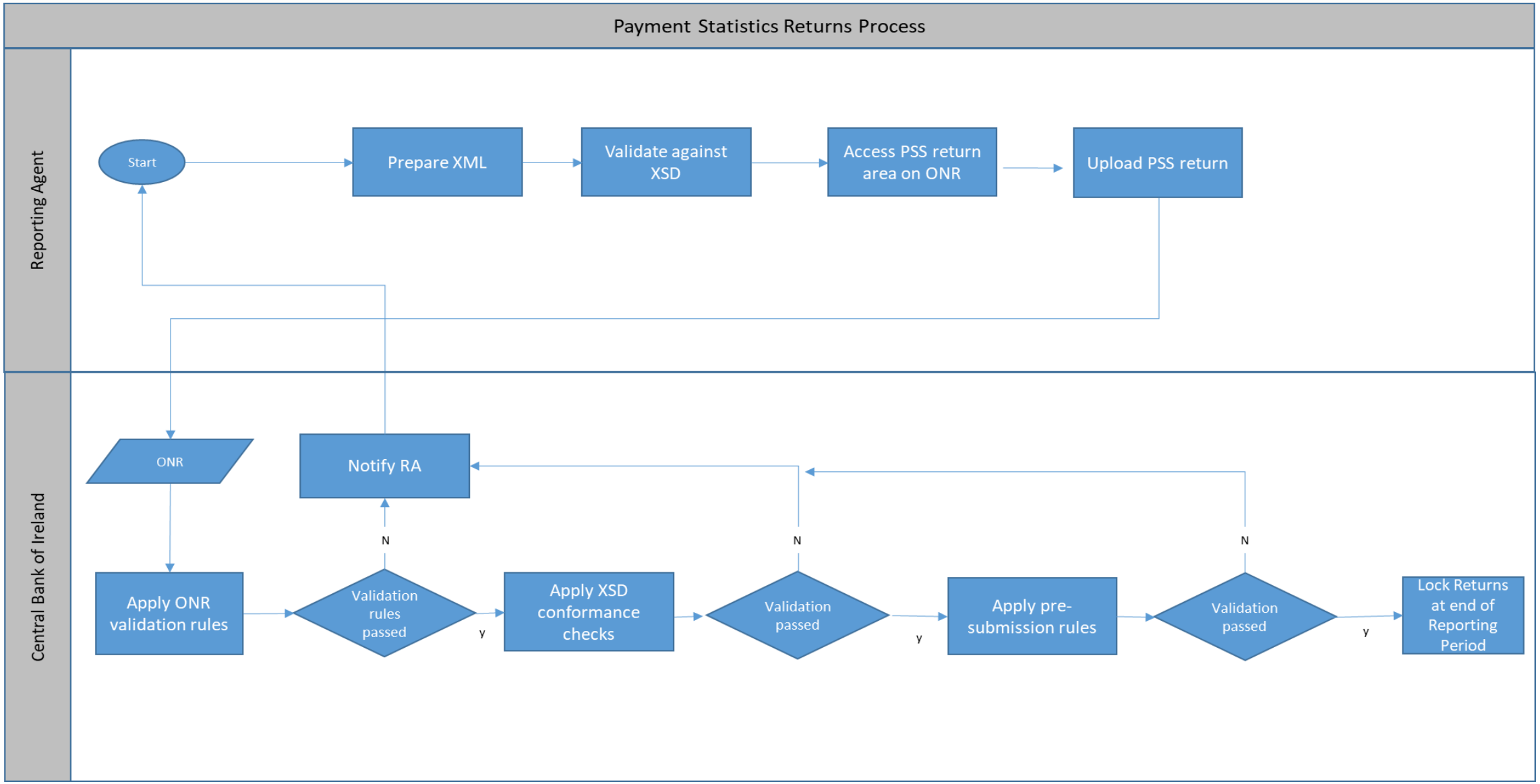
ONR Upload process

Data quality process overview

Data validation – timelines

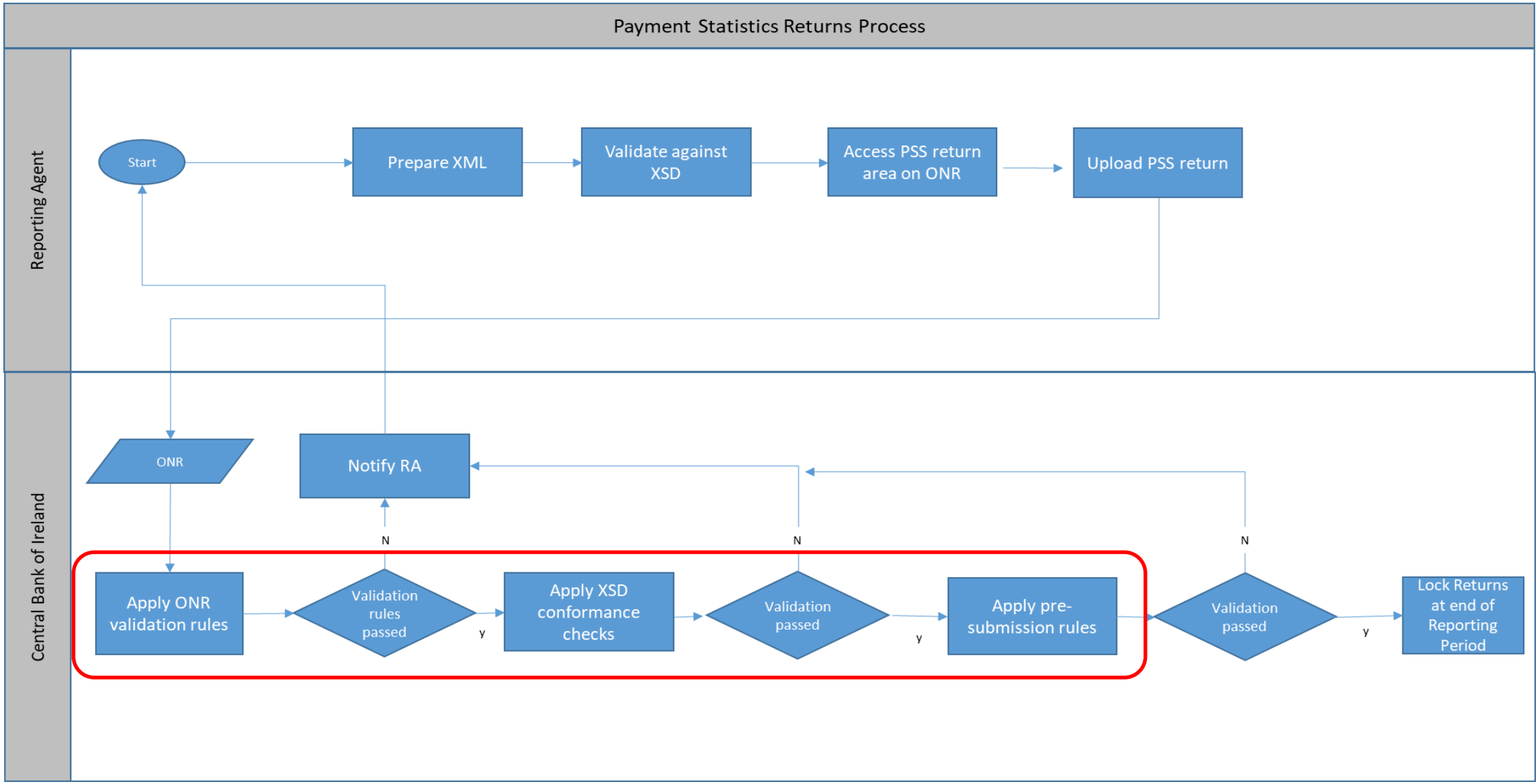
Production cycle for reference period Q1 2022




Payment Statistics Returns Process
Reporting Agent
Start
Prepare XML
Validate against XSD
Access PSS return area on ONR
Upload PSS return
Central Bank of Ireland
ONR
Notify RA
Apply ONR validation rules
Validation rules passed
N
y
Apply XSD conformance checks
Validation passed
N
y
Apply pre-submission rules
Validation passed
N
y
Lock Returns at end of Reporting Period

Pre-submission validations

PSQ : Process Flow – pre-submission validations



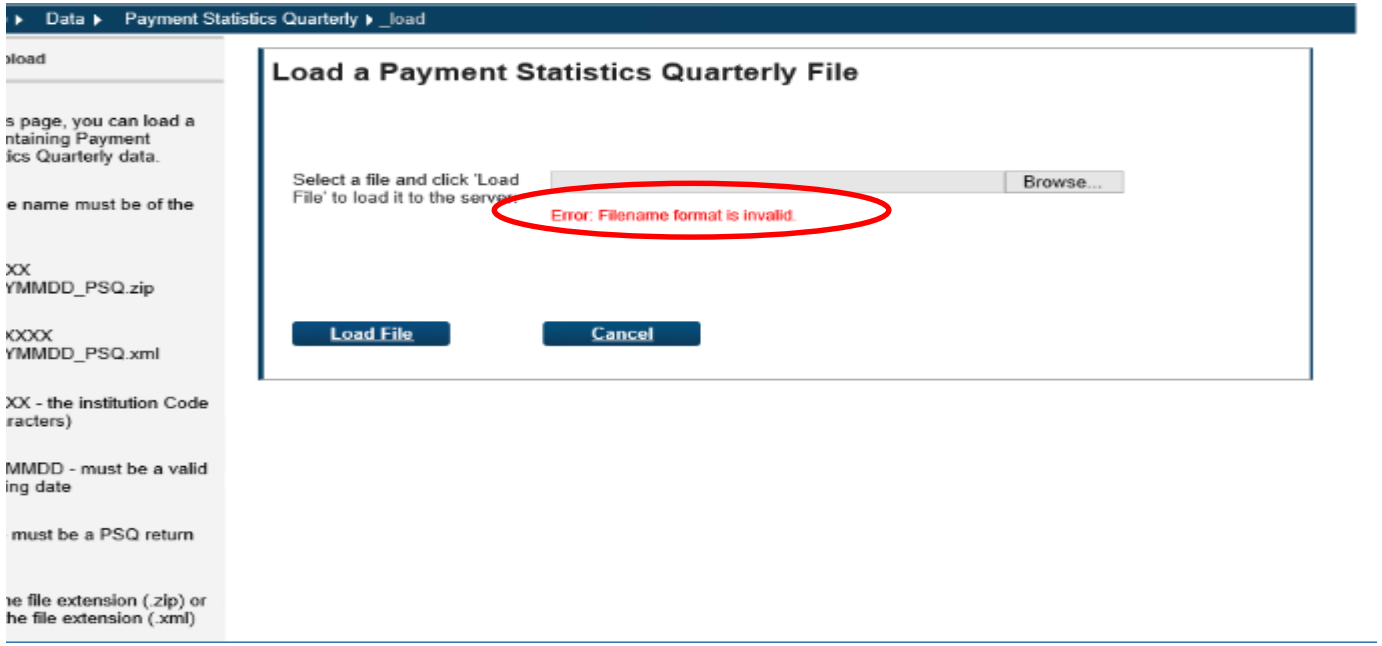
ONR Validation checks

- 1st level of validation checks – at the time of upload
- Naming convention:
  - Cxxxxxx_yyyymmdd_PSQ
- Incorrect file name elements
- File formats and file size limits:
  - XML: if .xml file size < 30 MB
  - Single .zip file <30MB containing one .xml file <200MB
- Single file upload
- If ONR checks are broken, no further checks will apply
- Result available instantly on-screen

ONR Validation checks

Naming convention is not followed

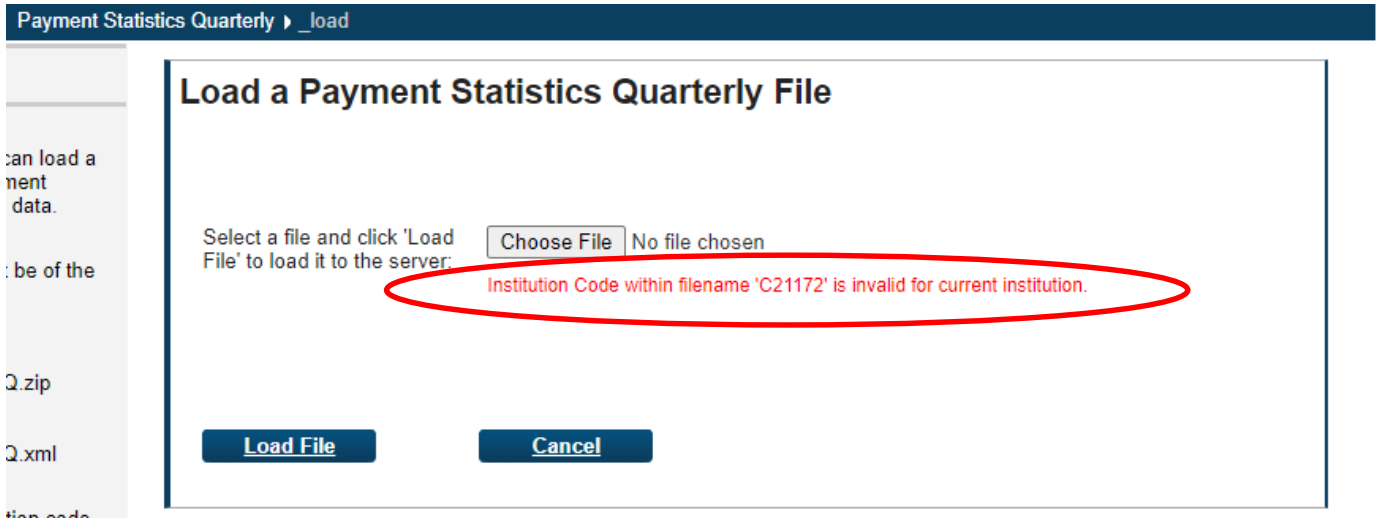
- Cxxxxxx_yyyymmdd_PSQ



ONR Validation checks

Incorrect file name elements

- Incorrect C code on the file name
- XML file C code header correct

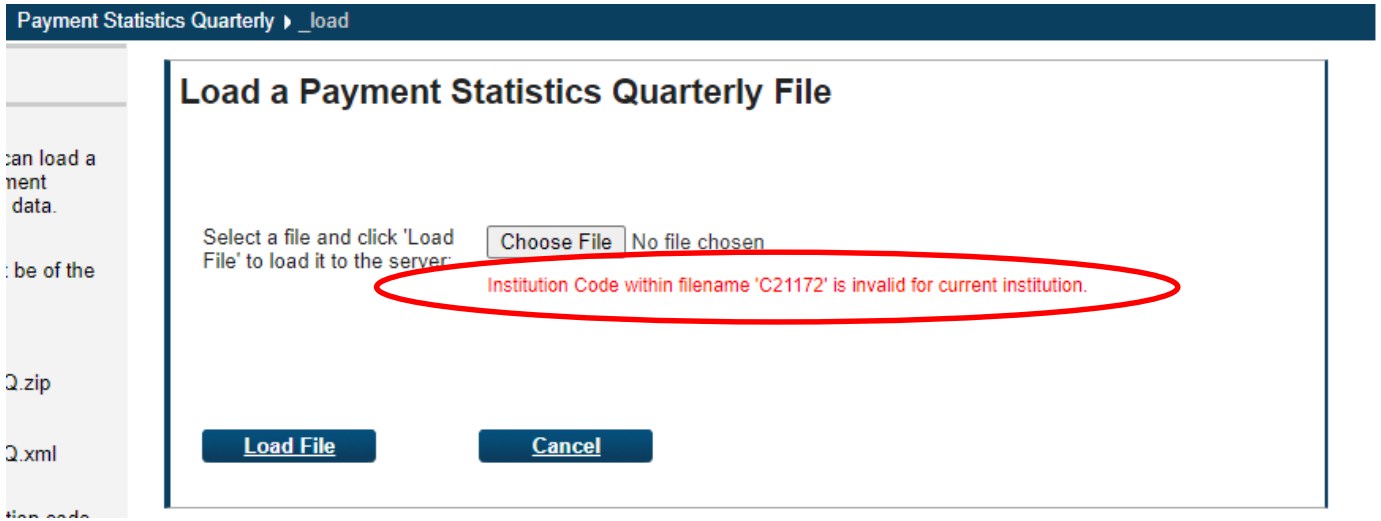


Filename: C21172_20211231_PSQ
Institution code: C21174
Institution code(filename): C21172
Institution code header (inside the file): C21174

ONR Validation checks

Incorrect file name elements

- Incorrect C code on the file name
- XML file C code header incorrect

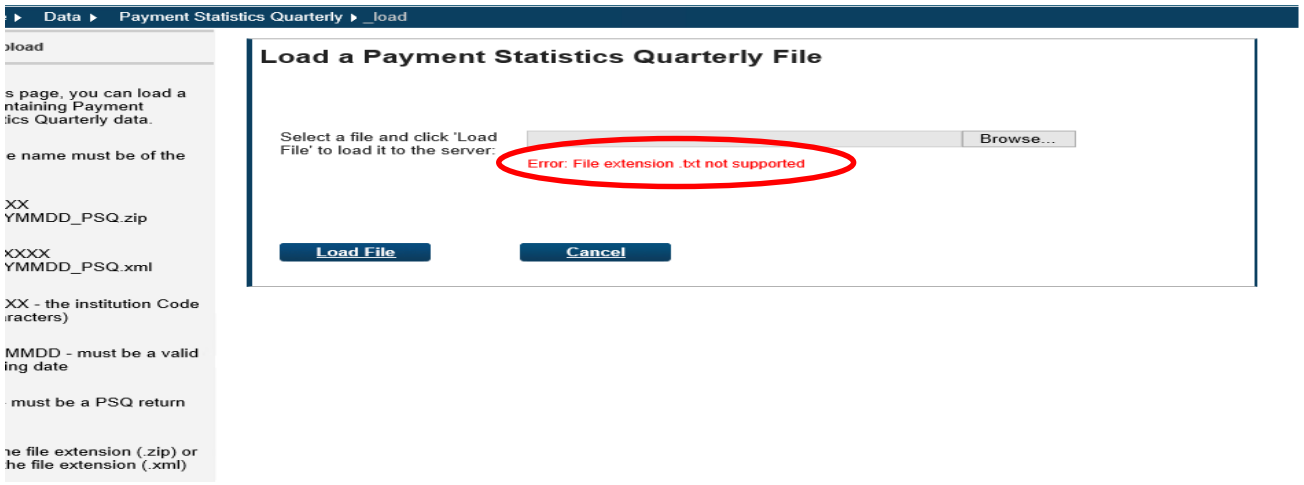


Institution code: C21174
Institution code(filename): C21172
Institution code header (inside the file): C21172

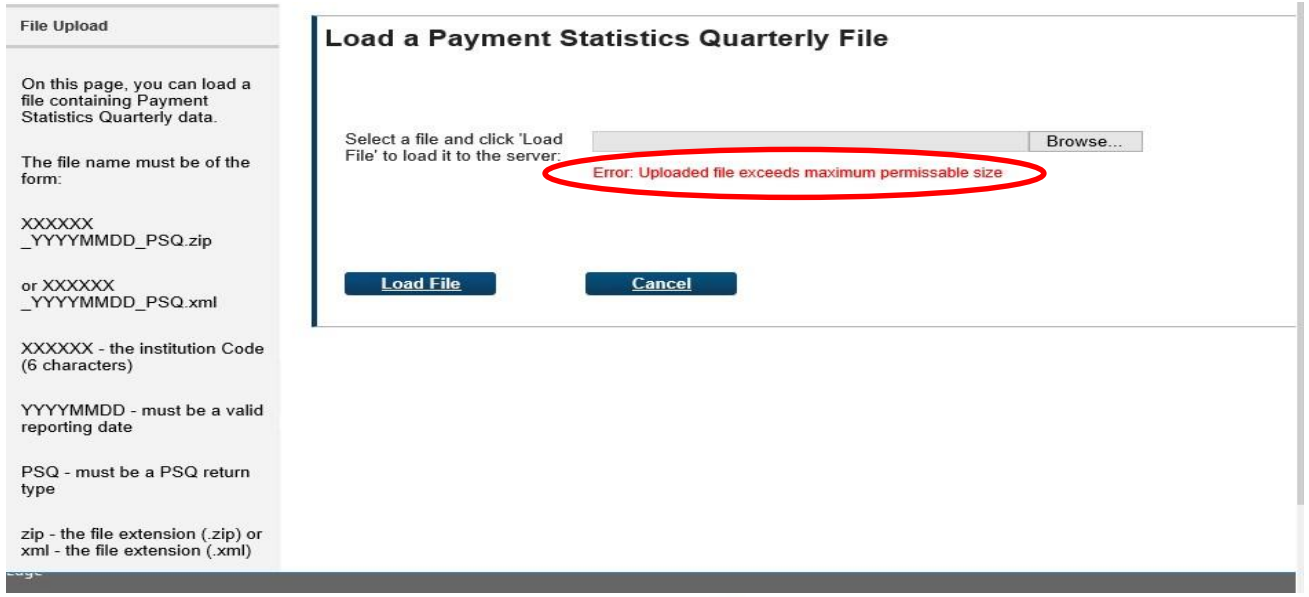
Check on file name as 1st level –> no further checks will apply ->
XML file header check performed at the 3rd level checks

ONR Validation checks

- File format:
  - .xml or .zip file
  - Any other file formats won't be uploaded

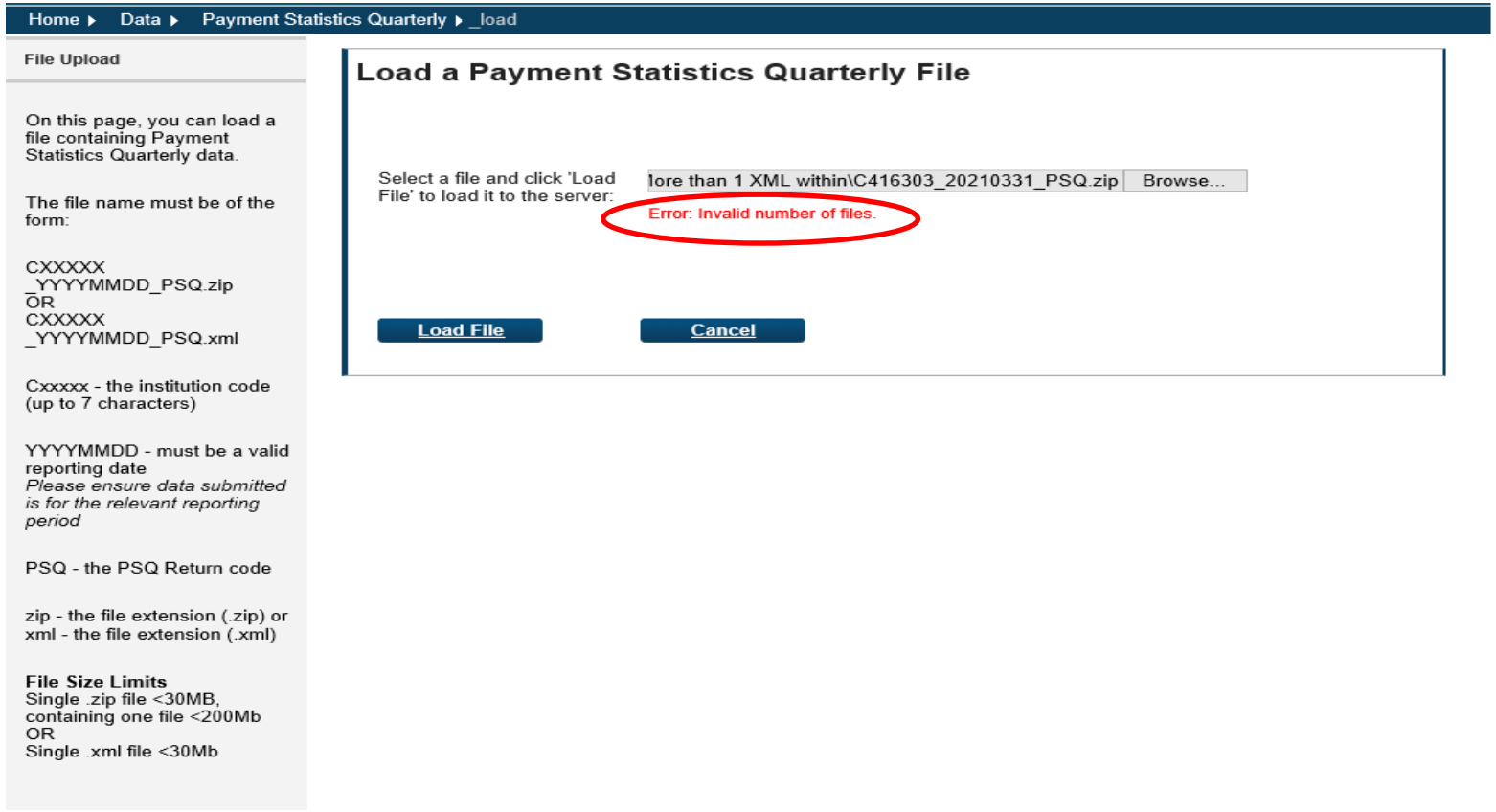


- File size limits:
  - XML: if .xml file size < 30 MB
  - Single .zip file <30MB containing one .xml file <200MB



ONR Validation checks

- Single file upload
- Error Message if more than one file found inside the Zip file

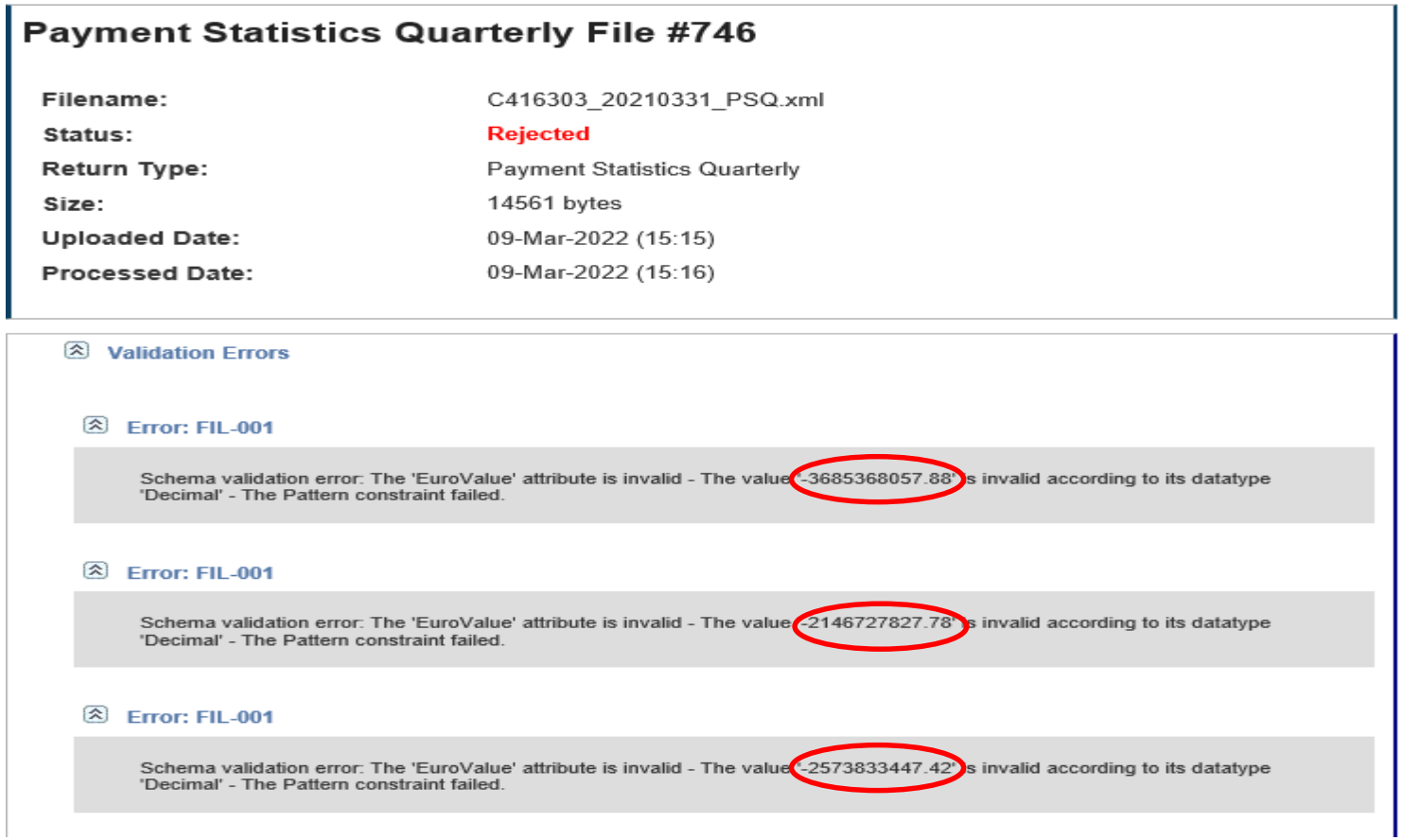


XSD Conformance checks

- 2nd level of validation checks
- Available as part of the XML scheme
- Check to confirm that the XML file submitted conforms to the XML schema
- Should be run as part of the XSD prior to upload on ONR
- All data points reported should be >= 0
- Data to be reported in original units
  - Values:
    - 2 decimal points;
    - All values should be reported with 2 digits – example: 1 should be reported as 01.00
  - Volumes:
    - Integer
- Errors displayed as per XSD conformance checks – technical vocabulary displayed
- Onscreen messaging and feedback file on XSD Conformance checks limited to 50 errors – should this be an error relating to the structure, only one error will be displayed . Example: if a closing tag is removed this will result in the code not parsing correctly – to avoid this, the file generator should use the schema.

XSD Conformance checks

- All data points reported should be >= 0



Payment Statistics Quarterly File #746

Filename:	C416303_20210331_PSQ.xml
Status:	**Rejected**
Return Type:	Payment Statistics Quarterly
Size:	14561 bytes
Uploaded Date:	09-Mar-2022 (15:15)
Processed Date:	09-Mar-2022 (15:16)

Validation Errors

Error: FIL-001

Schema validation error: The 'EuroValue' attribute is invalid - The value '-3685368057.88' is invalid according to its datatype 'Decimal' - The Pattern constraint failed.

Error: FIL-001

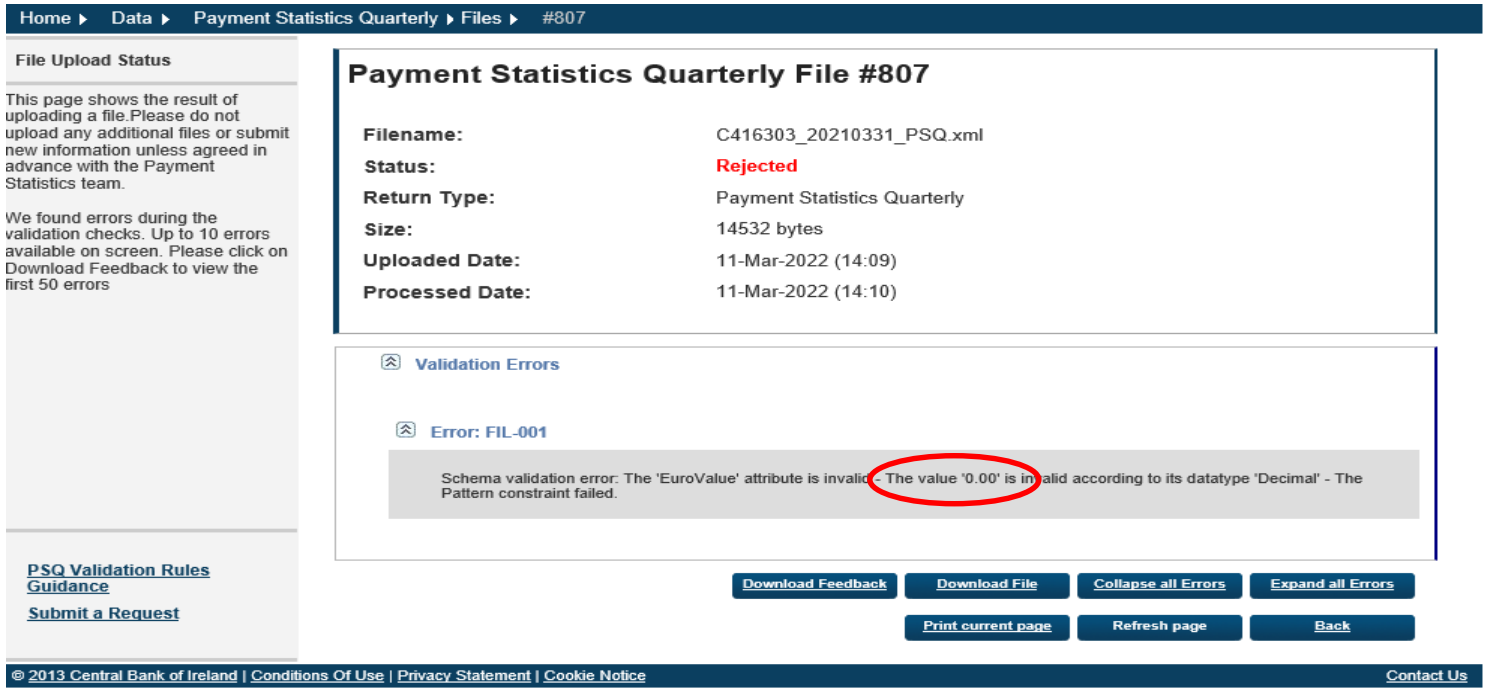
Schema validation error: The 'EuroValue' attribute is invalid - The value '-2146727827.78' is invalid according to its datatype 'Decimal' - The Pattern constraint failed.

Error: FIL-001

Schema validation error: The 'EuroValue' attribute is invalid - The value '-2573833447.42' is invalid according to its datatype 'Decimal' - The Pattern constraint failed.

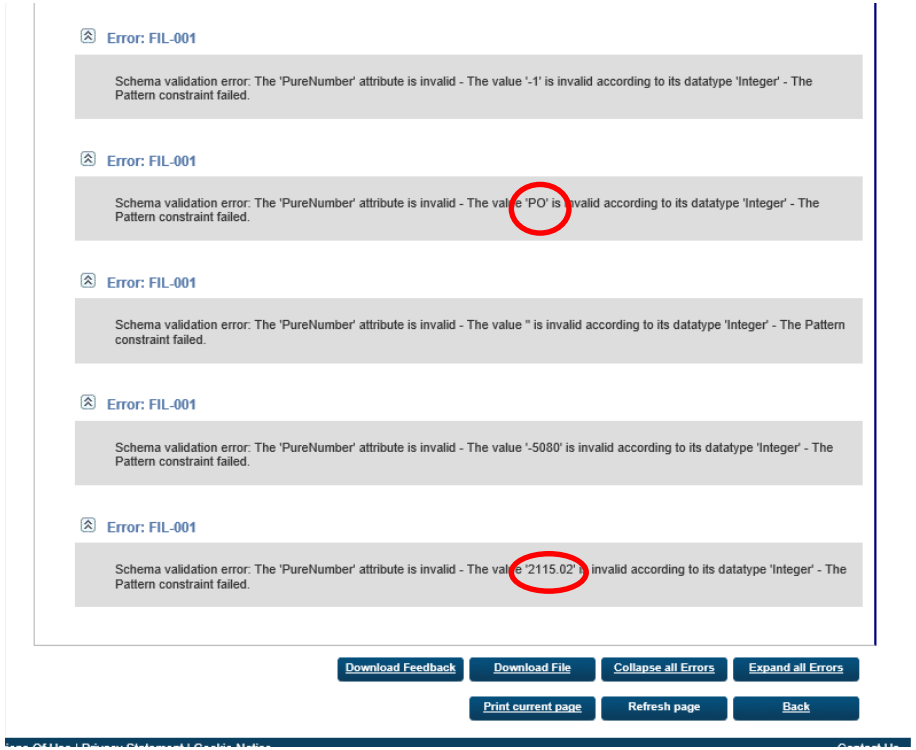
XSD Conformance checks

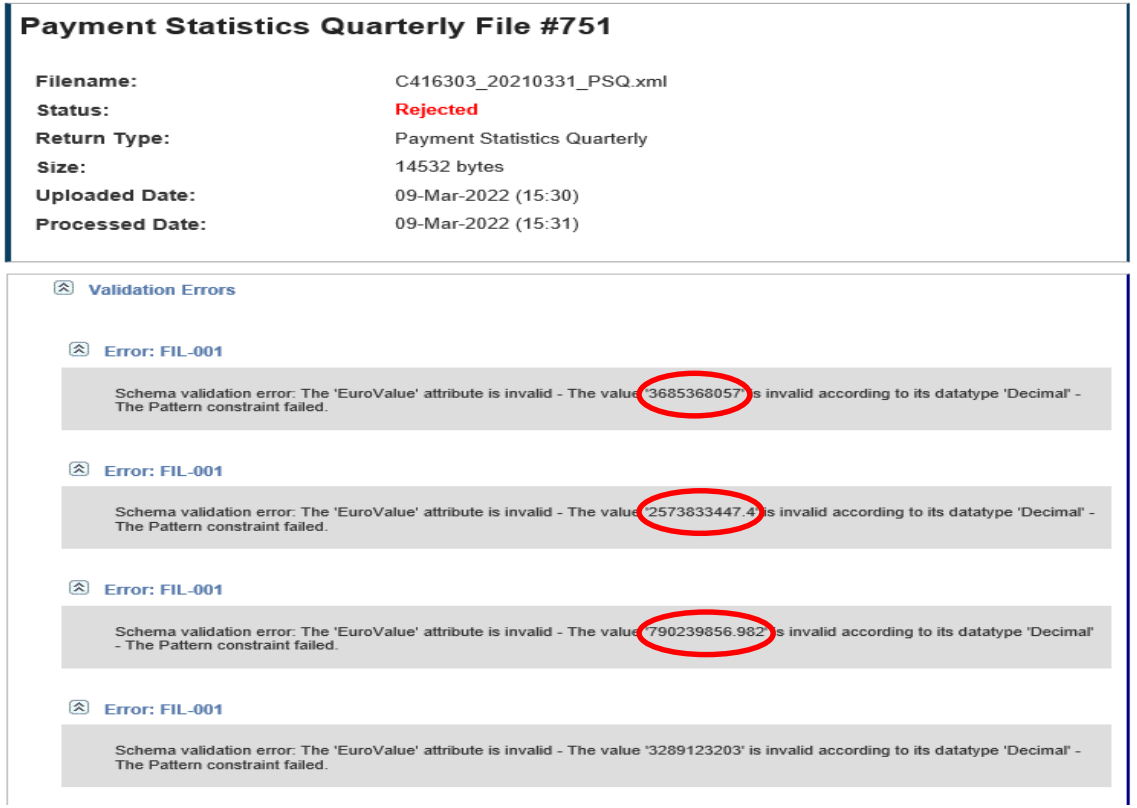
- Data to be reported in original units
  - Values:
    - 2 decimal points;
    - All values should be reported with **2 digits** – example: 0 should be reported as **00.00**
  - Volumes:
    - Integer



XSD Conformance checks

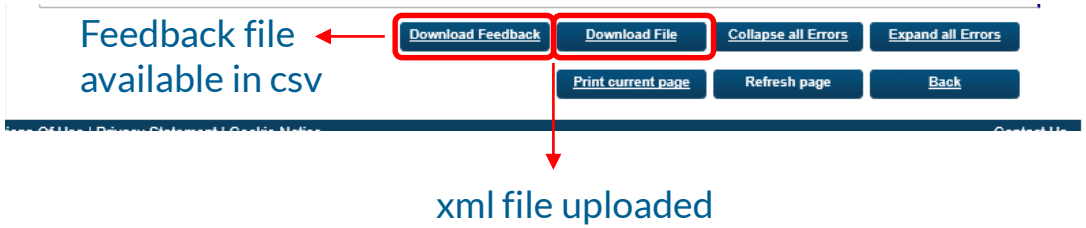
- Data to be reported in original units
  - Values:
    - 2 decimal points;
    - All values should be reported with 2 digits – example: 0 should be reported as 00.00
  - Volumes:
    - Integer





XSD Conformance checks

- Onscreen messaging and feedback file on XSD Conformance checks limited to 50 errors



- Information available on the feedback file:
  - File upload date/time
  - Error description:
    - Example: Schema validation error: The 'EuroValue' attribute is invalid - The value '14049284647' is invalid according to its datatype 'Decimal' - The Pattern constraint failed

  - Feedback file for institution use only – not to be sent back to the Central Bank of Ireland

Pre-submission (consistency) validation rules

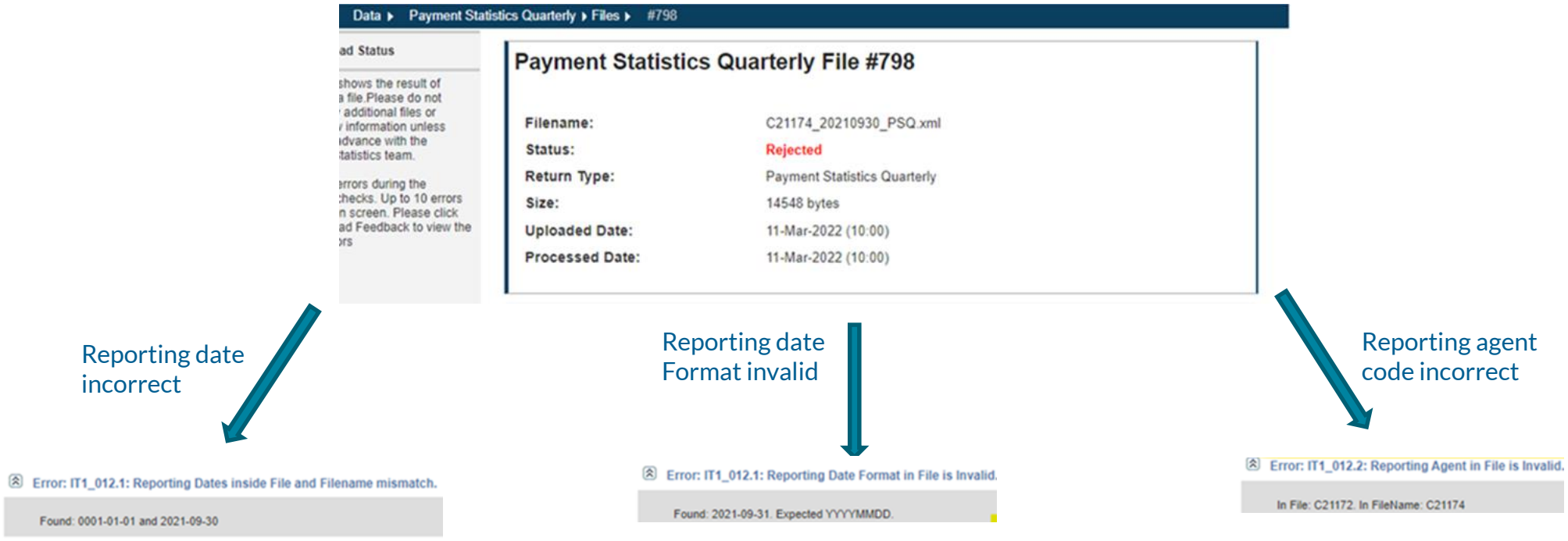
- 3rd level validation checks

- Data consistency and other checks
  - Reporting date and reporting agent code (header) included in the XML file
  - Duplicate entries
  - Validation rules PCP_PMC.LIN.QAR._Z.??.038 and PCP_PMC.LIN.QAR._Z.??.040
  - Check that if a value is submitted a corresponding volume is expected (and vice-versa) -> where reported PN and EUR both = 0 or are >0

- Onscreen and downloadable file limited to 50 errors

Pre-submission (consistency) validation rules

- Reporting agent and reporting period included inside the XML file



Pre-submission (consistency) validation rules

- No duplicated series/data points allowed

Validation Errors

Error: MAX-ERR: Error Threshold of 50 Reached.

Found 577 Errors. We have halted further validation. Please review your submission.

Error: IT1_010: Duplicate Found

577 Duplicate Series Keys Found. Including: PMC.Q.IE._Z.IM.NR.9311.N, PMC.Q.IE._Z.IM.R.7996.N, PMC.Q.IE._Z.IM.NR.5551.N, PMC.Q.IE._Z.IM.R.6010.N, PMC.Q.IE._Z.IM.NR.5271.N, PMC.Q.IE._Z.IM.R.7829.N, PMC.Q.IE._Z.IM.NR.5942.N, PMC.Q.IE._Z.IM.R.5712.N, PMC.Q.IE._Z.IM.NR.7832.N, PMC.Q.IE._Z.IM.R.5499.N, PMC.Q.IE._Z.IM.NR.4112.N, PMC.Q.IE._Z.IM.R.4900.N, PMC.Q.IE._Z.IM.NR.0780.N, PMC.Q.IE._Z.IM.R.7361.N, PMC.Q.IE._Z.IM.NR.9402.N, PMC.Q.IE._Z.IM.R.4813.N, PMC.Q.IE._Z.IM.NR.1711.N, PMC.Q.IE._Z.IM.R.8021.N, PMC.Q.IE._Z.IM.NR.9751.N, PMC.Q.IE._Z.IM.NR.7998.N, PMC.Q.IE._Z.IM.R.5974.N, PMC.Q.IE._Z.IM.NR.4214.N, PMC.Q.IE._Z.IM.R.8651.N, PMC.Q.IE._Z.IM.NR.5998.N, PMC.Q.IE._Z.IM.R.5996.N, PMC.Q.IE._Z.IM.NR.1520.N, PMC.Q.IE._Z.IM.R.6011.N, PMC.Q.IE._Z.IM.NR.7641.N, PMC.Q.IE._Z.IM.R.5074.N, PMC.Q.IE._Z.IM.NR.5691.N,

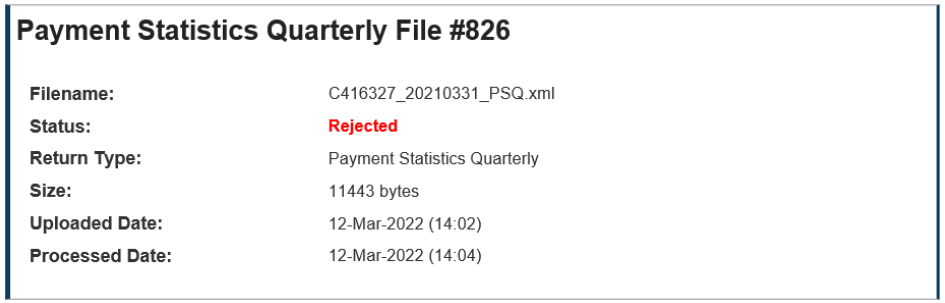
Pre-submission (consistency) validation rules

- Consistency checks: explain the relationship between the reporting requirements
  - Card-based payment transactions initiated electronically via non-remote payment channel are greater or equal the sum of the MCC
  - Card-based payment transactions initiated electronically via remote payment channel are greater or equal the sum of the MCC

Table LHS	Table RHS	Type	ID	DSD	LHS	Op.	RHS	Applies to Number and Value (last ?? replaced by PN for number and EUR for value)
Table 9	Table 9	Consistency	PCP_PMC.LIN.QAR._Z.??.038	PCP_PMC	PCP.Q.IE._Z.??.CP0.1.2000.NR.PCS_ALL._Z._X._Z.N.??	GTE	PMC.Q.IE._Z.??.NR.G000.N.??	Y
Table 9	Table 9	Consistency	PCP_PMC.LIN.QAR._Z.??.040	PCP_PMC	PCP.Q.IE._Z.??.CP0.1.2000.R.PCS_ALL._Z._X._Z.N.??	GTE	PMC.Q.IE._Z.??.R.G000.N.??	Y

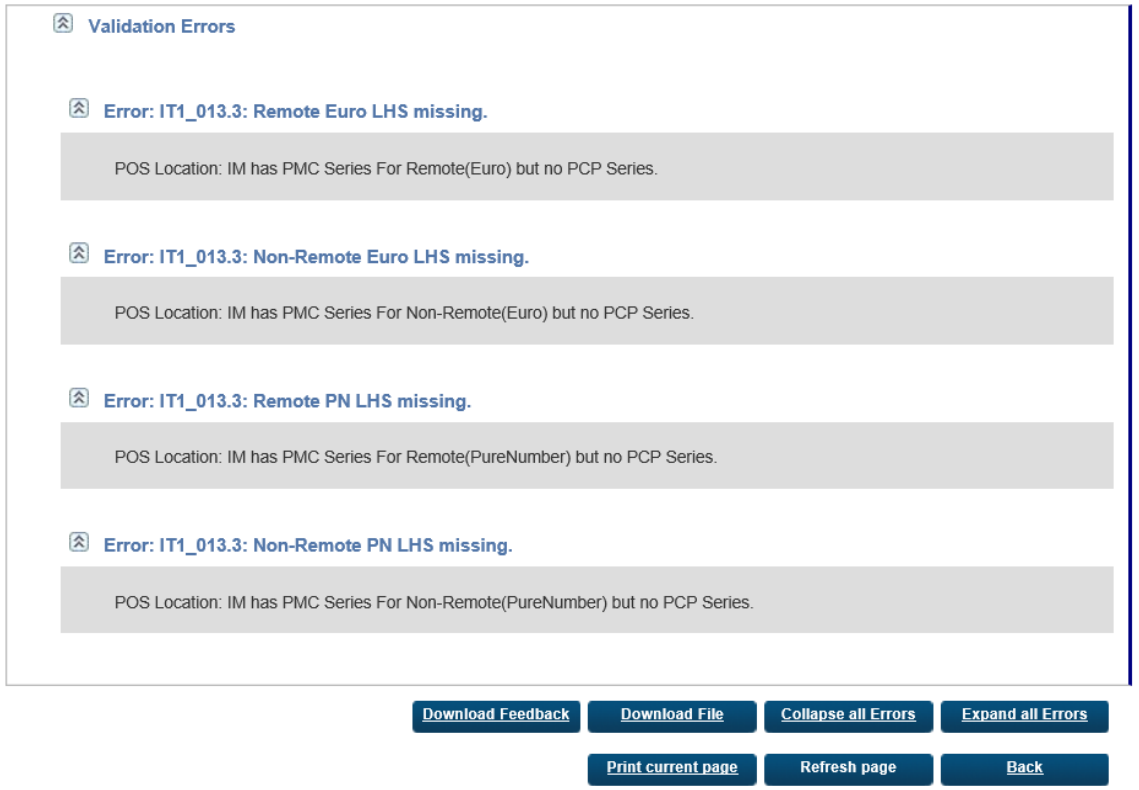
Pre-submission (consistency) validation rules

- Consistency checks: explain the relationship between the reporting requirements
  - Card-based payment transactions initiated electronically via non-remote payment channel are greater or equal the sum of the MCC
  - Card-based payment transactions initiated electronically via remote payment channel are greater or equal the sum of the MCC



Payment Statistics Quarterly File #826

Filename:	C416327_20210331_PSQ.xml
Status:	Rejected
Return Type:	Payment Statistics Quarterly
Size:	11443 bytes
Uploaded Date:	12-Mar-2022 (14:02)
Processed Date:	12-Mar-2022 (14:04)



Validation Errors

Error: IT1_013.3: Remote Euro LHS missing.

POS Location: IM has PMC Series For Remote(Euro) but no PCP Series.

Error: IT1_013.3: Non-Remote Euro LHS missing.

POS Location: IM has PMC Series For Non-Remote(Euro) but no PCP Series.

Error: IT1_013.3: Remote PN LHS missing.

POS Location: IM has PMC Series For Remote(PureNumber) but no PCP Series.

Error: IT1_013.3: Non-Remote PN LHS missing.

POS Location: IM has PMC Series For Non-Remote(PureNumber) but no PCP Series.

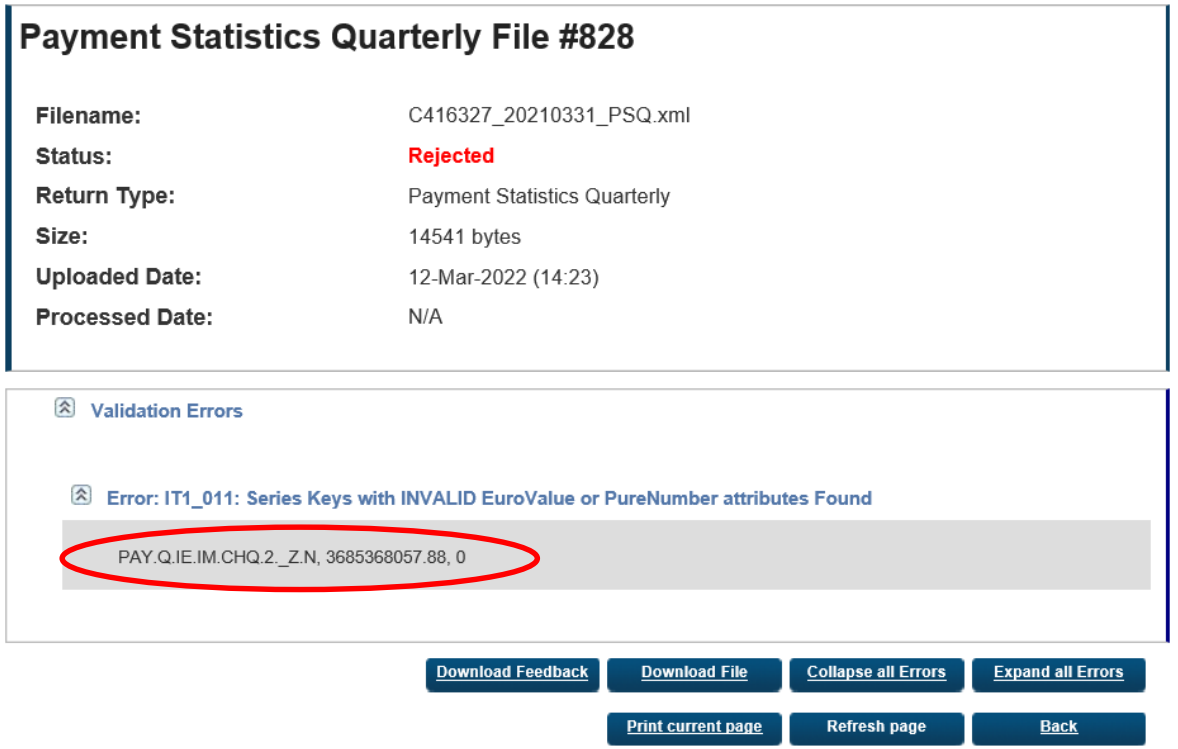
Download Feedback | Download File | Collapse all Errors | Expand all Errors

Print current page | Refresh page | Back

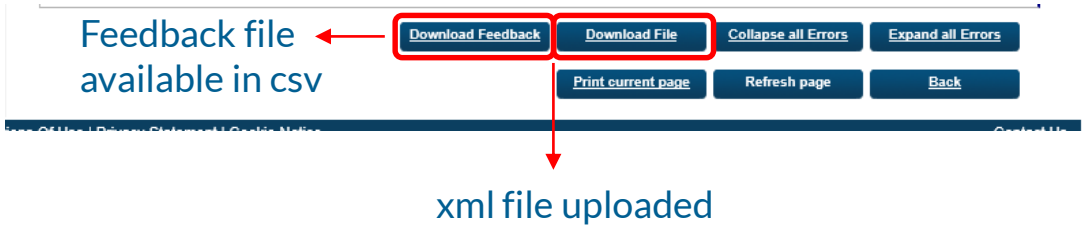
Pre-submission (consistency) validation rules

- Check that if a value is submitted a corresponding volume is expected (and vice-versa) -> where reported PN and EUR both = 0 or are >0

PureNumber set as zero while EuroValue is different than zero for PAY.Q.IM.CHQ.2._Z.N



Pre-submission (consistency) validation rules



- Onscreen messaging and feedback file on pre-submission checks limited to 50 errors
- Information available on the feedback file:
  - File upload date/time
  - Error description:
    - Example: IT1_011: Series Keys with INVALID EuroValue or PureNumber attributes Found -> PCP.Q.IE._Z.IM.CP0.1.2000.NR.PCS_ALL._Z._X._Z.N, 30.00, 0
  - Feedback file for institution use only – not to be sent back to the Central Bank of Ireland

Post-submission validations

Post-submission checks

- Plausibility checks
  - Trend analysis
  - Comparison between Quarterly vs PSA (estimated quarters)
- Cross-returns (semi-annual vs quarterly)
- Further checks and details to be communicated at a later stage

Way Forward

- External UAT starting 15th March to end-April
  - If not yet set up on ONR please e-mail paystats@centralbank.ie requesting a test user. Please provide:
    - First Name, Last Name
    - Existing ONR username (if applicable)
    - E-mail
    - Phone number

- 2021 PSA/PFD data – due at the Central Bank by 31 March 2022 (under old format, in Excel)

Way Forward

- All 2022 reference data will be submitted under the Updated ECB Regulation
  - Full reporters:
    - Q1 2022 data due at the Central Bank by 29th April 2022 (T+20 WD)
      - Post-submission queries to be expected during May and early June 2022
    - Q2 2022 data due at the Central Bank by 28th July 2022
    - Q3 2022 data due at the Central Bank by 28th October 2022
    - H1 2022 data due at the Central Bank by August 2022
      - Post-submission queries including Table4a/Table 9 alignment queries expected during September/October 2022
  - Derogated reporters:
    - H1 2022 data due at the Central Bank by August 2022

QUESTIONS?

paystats@centralbank.ie